portance of some triple alloys, and on the substitution of pure iron for steel in the formation of alloys.

Some Observations on the Buffy Coat of the Blood, &c. *By* John Davy, *M.D. F.R.S.* Read April 18, 1822. [*Phil. Trans.* 1822, *p.* 271.]

The peculiar appearance which the blood sometimes assumes after its coagulation, and which has been termed "buff," has been referred by Mr. Hewson to its increased tenuity and slow coagulation. Dr. Davy is inclined to ascribe the separation of the colouring matter from a part of the coagulum, or diminished viscidity to the former rather than the latter cause; for he has remarked that blood drawn in several inflammatory diseases coagulates with its usual rapidity, and yet forms the buffy coat: its specific gravity also rather exceeds than falls short of that of healthy blood.

Dr. Davy next adverts to the opinion that the age of the morbid adhesions, which on dissection are often found to connect together serous membranes, is proportionate to their strength: but as he has found strong adhesions formed in twenty-four hours between surfaces of the pleura, in consequence of inflammation artificially excited; and as he has remarked a peculiar tenacity in the coagulable lymph of the blood, enabling it to be drawn out into bands and fibres, which become solid and opake, and thus represent ordinary adhesions, he is inclined to doubt the correctness of the above opinion.

Lastly, the author mentions the supposed pouring out of serous fluids into certain cavities, after death; and cites experiments to show that, under ordinary circumstances, no such effusion or exudation of serum takes place.

On the Mechanism of the Spine. *By* Henry Earle, *Esq. F.R.S. Surgeon to the Foundling, and Assistant Surgeon to St. Bartholomew's Hospital.* Read April 25, 1822. [*Phil. Trans.* 1822, *p.* 276.]

In examining the structure of the vertebræ in different animals, the author was particularly struck with the mechanism of the spine and spinal canal in birds, by which great motion is gained in the neck without injury to the spinal marrow. The cervical vertebræ in birds vary from 9 to 24 in number; they differ considerably from each other, and are articulated by complex joints, in some respects resembling the articulation of the olecranon with the humerus in the human subject, but admitting also of lateral motion. The varying positions of the articulating surfaces are favoured by the interposition of a cartilage, adapted to the surface of each bone, and inclosed between reduplications of sinovial membrane; each joint is thus double, and resembles the articulation of the human lower jaw. The canal of each vertebra is contracted in the centre, and enlarges above and